

assay I in plasma vols. as low as 10 .mu.L for concns. within the normal therapeutic range. In the gas-chromatog.-**mass spectrometric** (GC-MS) **assay**, gas chromatog. sepns. were achieved on a glass column packed with OV-1 on Gas Chrom Q. The sensitivity of the assays was 500 ng by radioenzymic **assay**, in the pg range for the gas chromatog. with electron capture **assay**, and was <1 mg for the GC-MS **assay**. I was stable in the presence of other antibiotics. A good correlation was achieved between the MS **assay** and either the radioenzymic **assay** or electron capture **assay**.

=> d his

(FILE 'HOME' ENTERED AT 20:50:09 ON 25 AUG 2000)

FILE 'CA' ENTERED AT 20:50:15 ON 25 AUG 2000

L1	1197 S RETENTATE
L2	21 S L1 AND CHROMATOGRAPHY
L3	347206 S SPECTROMET?
L4	169834 S L3 AND (MASS OR DESORPT? OR ION?)
L5	63 S L4 AND CAPTURE (10W) CHROMATOGR?
L6	0 S L5 AND SCREEN?
L7	2 S L5 AND INHIBIT?
L8	61 S L5 NOT L7
L9	0 S L8 AND RECEPTOR (10W) LIGAND
L10	5 S L8 AND ASSAY

=> s bacterial(10w)cells

143382 BACTERIAL
1056173 CELLS
L1 7835 BACTERIAL(10W)CELLS

=> s l1 and sample

MISSING TERM AFTER L1 AND
Operators must be followed by a search term, L-number, or query name.

=> s l1 and sample#

870391 SAMPLE#
L2 466 L1 AND SAMPLE#

=> s l2 and mass spectromet?

498296 MASS
336490 SPECTROMET?
133005 MASS SPECTROMET?
(MASS(W)SPECTROMET?)
L3 20 L2 AND MASS SPECTROMET?

AUTHOR(S):
Nobrega,

bleached kraft effluent by GPC and ultrafiltration
Lage, Liane E. C.; Sant'Anna, Geraldo L., Jr;

CORPORATE SOURCE:
SOURCE:

Ronaldo
PEQ/COPPE/UFRJ, Rio de Janeiro, CEP 21945-970, Brazil
Bioresour. Technol. (1998), Volume Date 1999, 68(1),
63-70
CODEN: BIRTEB; ISSN: 0960-8524

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:

Elsevier Science Ltd.
Journal
English

AB The mol. wt. distribution (MWD) of chlorinated compds. of bleached kraft
pulp mill effluent was investigated by aq. gel permeation chromatog.

(GPC)

and ultrafiltration. The effluent was fractionated by ultrafiltration,
using different cut-off membranes (MW 50000, 20000, 10000, and 8000).

The

retentate and permeate of each ultrafiltration was analyzed by
GPC. The results showed that the mol. wt. distribution for all samples
ranged from 200 to 550 Da. Two effects were discussed, i.e., associative
interactions between the compds. to form high mol. assocd. complexes
(aggregates); and non-size-exclusion effects, e.g. ion exclusion.
Aggregates formation was confirmed by ultrafiltration expts., using a
50000 cut-off membrane.

REFERENCE COUNT:

20

REFERENCE(S):

- (2) Bahary, W; Journal of Applied Polymer Science
1993, V48, P1531 CA
(4) Cammarota, M; Environ Technol 1992, V13, P65 CA
(5) Esposito, E; Biotechnology Letters 1991, V13(8),
P571 CA
(6) Garcia, R; Journal of Chromatography A 1993,
P191 CA
(7) Garcia, R; Journal of Chromatography A 1993,

V655,

V655,

P3 CA

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 21 CA

COPYRIGHT 2000 ACS

ACCESSION NUMBER:

130:92457 CA

TITLE:

Retentate chromatography and
protein chip arrays with applications in biology and
medicine

INVENTOR(S):

Hutchens, T. William; Yip, Tai-tung

PATENT ASSIGNEE(S):

Ciphergen Biosystems, Inc., USA

SOURCE:

PCT Int. Appl., 157 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9859362	A1	19981230	WO 1998-US12908	19980619
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9884721	A1	19990104	AU 1998-84721	19980619
EP 990258	A1	20000405	EP 1998-935479	19980619

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI
NO 996243 A 20000217 NO 1999-6243 19991216
PRIORITY APPLN. INFO.: US 1997-54333 19970620
US 1997-67484 19971201
WO 1998-US12908 19980619

AB This invention provides methods of **retentate** chromatog. for resolving analytes in a sample. The methods involve adsorbing the analytes to a substrate under a plurality of different selectivity conditions, and detecting the analytes retained on the substrate by desorption spectrometry. The methods are useful in biol. and medicine, including clin. diagnostics and drug discovery.

REFERENCE COUNT: 5
REFERENCE(S): (1) Afeyan, N; US 5453199 A 1995
(2) Sheiman, M; US 4752562 A 1988 CA
(3) Terrapin Diagnostics Ltd; WO 8903430 A 1989
(4) Vestal, M; US 5498545 A 1996
(5) Zeneca Ltd; GB 2281122 A 1995

L2 ANSWER 4 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 130:92456 CA
TITLE: **Retentate chromatography** and protein chip arrays with applications in biology and medicine
INVENTOR(S): Hutchens, T. William; Yip, Tai-tung
PATENT ASSIGNEE(S): CIPHERGEN BIOSYSTEMS, INC., USA
SOURCE: PCT Int. Appl., 157 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9859361	A1	19981230	WO 1998-US12907	19980619
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9883753	A1	19990104	AU 1998-83753	19980619
EP 990257	A1	20000405	EP 1998-934162	19980619
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI			
PRIORITY APPLN. INFO.:			US 1997-54333	19970620
			US 1997-67484	19971201
			WO 1998-US12907	19980619

AB This invention provides methods of **retentate** chromatog. for resolving analytes in a sample. The methods involve adsorbing the analytes to a substrate under a plurality of different selectivity conditions, and detecting the analytes retained on the substrate by desorption spectrometry. The methods are useful in biol. and medicine, including clin. diagnostics and drug discovery.

REFERENCE COUNT: 4
REFERENCE(S): (1) Baylor College Medicine; WO 9428418 A 1994
(2) Medical Res Council; WO 9406920 A 1994
(3) Univ Washington; WO 9709068 A 1997
(4) Vestal, M; US 5498545 A 1996

L2 ANSWER 5 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 130:78445 CA

under a plurality of different selectivity conditions, adsorbing a sample analyte to a receptor on a substrate

The method of identifying a drug that interacts with a protein substrate

for 20-60 min before starting the ultrafiltration. Plasmid DNA may be further purified after tangential flow ultrafiltration by filtering the **retentate** soln. through a 0.2- μ m filter and applying the filtered plasmid DNA soln. to a pos. charged ion change chromatog. resin, an further purifn. by an addnl. diafiltration step. A scaleable process for producing pharmaceutical grade plasmid DNA, useful for gene therapy, is provided, which is efficient and avoids the use of toxic org. chems. The pharmaceutical plasmid DNA compn. comprises <100 endotoxin units per mg nucleic acid, <2% RNA, <1% single-stranded DNA, <0.1% protein, <1% genomic DNA, and >90% closed circular plasmid DNA.

L2 ANSWER 8 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 128:21534 CA

TITLE: New method of preparation of bovine colostrum immunoglobulins for parenteral application in calves

AUTHOR(S): Semotan, K.; Kalab, D.

CORPORATE SOURCE: Czech Rep.

SOURCE: Vet. Med. (Prague) (1997), 42(9), 249-252

CODEN: VTMDAR; ISSN: 0375-8427

PUBLISHER: Ustav Zemedelskych a Potravinarskych Informaci

DOCUMENT TYPE: Journal

LANGUAGE: Czech

AB A new simple method of prepn. of bovine colostrum Igs was described using a single step pptn. of skimmed bovine colostrum with dimethylaurylbenzylammonium bromide (DMLBAB). This quaternary ammonium compd. pptd. simultaneously nearly all colostrum proteins lacking antibody

activity. Bovine colostrum was collected mostly during of the first 24 h after calving, at the latest however until 48 h. Isolation of bovine colostrum Igs proceeded as follows; one vol. of skimmed colostrum contg. 3-6% of Igs was slowly pptd. with the same vol. of 2% water soln. of DMLBAB at pH 7.9-8.1 along with continuous stirring. Turbid mixt. was then heated to 43-45.degree. and subsequently cooled to a room temp. standing overnight. Heavy ppt. sedimented down and supernatant fluid contg. purified Igs was decanted and clarified by filtration. Residual DMLBAB occurring in the filtrate was removed by passage through a

strongly acidic cation exchange column prepd. in the Na⁺ form. Purified colostrum Igs were thickened to the required protein concn. by ultrafiltration. Dense **retentate** was clear and became an amber color. Av. yield of purified colostrum Igs reached 18.8 g/L of skimmed bovine colostrum. Electrophoretic purity of Igs fraction amounted to 90-95%. For

parenteral

application in calves the above soln. of Igs was subsequently adjusted to 9-11% content of protein, 0.9% of sodium chloride, pH 7.2, stabilized with

2% of aminoacetic acid and conserved with 0.015% of thiomersal. Finally, the prepn. was sterilized by filtration, kept its content of Igs minimally

2 yr at the temp. of storage between 2-8.degree. and remained biol. harmless. Using the method described it was not necessary to remove casein from skimmed bovine colostrum prior to the purifn. of Igs. Hence the method provided a significant short cut esp. in lab. as well as pilot scale prodn. of bovine colostrum Igs bringing about a marked economic benefit.

L2 ANSWER 9 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 127:360133 CA

TITLE: Molecular weight distribution of chlorolignin in bleached kraft pulp mill effluent by gel permeation chromatography and ultrafiltration

AUTHOR(S): Lage, Liane E. C.; Sant'anna, Geraldo L., Jr.;

Nobrega, Ronaldo

CORPORATE SOURCE: PEQ/COPPE/UFRJ, Rio de Janeiro, CEP 21945-970, Brazil

SOURCE: Braz. Symp. Chem. Lignins Other Wood Compon., Proc.,

Luiz
Departamento

5th (1997), Volume 6, 214-223. Editor(s): Ramos,
Pereira. Universidade Federal do Parana,
de Quimica: Curitiba, Brazil.
CODEN: 65HKA6

DOCUMENT TYPE: Conference
LANGUAGE: English

AB The mol. wt. distribution (MWD) of chlorinated compds. of bleached kraft
pulp mill effluent was investigated by aq. gel permeation chromatog.
(GPC)
and ultrafiltration. The effluent was fractionated by ultrafiltration,
using different cut-off membranes, i.e., MW 50000, 20000, 10000, and
8000.
The **retentate** and permeate of each ultrafiltration was analyzed
by GPC. The results showed that the wt.-av. mol. wt. for all samples
ranged from 400 to 800 Da. Two effects were discussed: associative
interactions between the compds. to form high-mol. assocd. complexes and
non-size-exclusion effects, e.g. polyelectrolyte expansion and ion
exclusion.

L2 ANSWER 10 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 127:238765 CA
TITLE: Quantitative molecular weight measurements by high
pressure size exclusion **chromatography** of
natural organic matter fractionated using
tangential-flow ultrafiltration
AUTHOR(S): Everett, Chris; Chin, Yu-Ping
CORPORATE SOURCE: Dep. Geological Scis., Ohio State Univ., Columbus,
OH,
43210, USA
SOURCE: Prepr. Pap. ACS Natl. Meet., Am. Chem. Soc., Div.
Environ. Chem. (1997), 37(2), 65-66
CODEN: NMACDY; ISSN: 0270-3009
PUBLISHER: American Chemical Society, Division of Environmental
Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The use of a tangential flow ultrafiltration device for isolating natural
org. matter (NOM) from water was studied. Waters were collected from a
variety of locations, including some that were well characterized by
others. The objectives were to fractionate mol. stds. and the NOM source
water by ultrafiltration; use high-pressure size-exclusion chromatog. to
examine the mol wt. avs. of the filtrate and **retentate** for each
NOM sample and compare them to those measured for the whole water; and
conduct characterization studies such as spectroscopic analyses for the
whole water samples and ultrafiltration retentates.

L2 ANSWER 11 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 124:155953 CA
TITLE: Preparation of hyperpolymers of hemoglobin with
uniform molecular weight
INVENTOR(S): Barnikol, Wolfgang
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 685492	A2	19951206	EP 1995-107280	19950513
EP 685492	A3	19960710		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,

SE

DE 4418973 A1 19951214 DE 1994-4418973 19940531
US 5994509 A 19991130 US 1998-57100 19980408

PRIORITY APPLN. INFO.:

DE 1994-4418973 19940531

AB Solns. of crosslinked Hb polymers are sepd. into fractions of uniform mol.

wt. by ultrafiltration, fractional pptn., chromatog., and/or fractional dissoln. Use of high-mol.-wt. Hb polymers in blood substitute solns. minimizes the viscosity and colloid osmotic pressure. Thus, a 20% soln. of glutaraldehyde-crosslinked Hb with a mol. wt. distribution of 65,000

to

15 .times. 106 was passed through an ultrafilter with a mol. wt. cutoff

of

106; the mol. wt. range of the polymer in the **retentate** was 500,000 to 15 .times. 106.

L2 ANSWER 12 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 120:53425 CA

TITLE: Apparatus and method for removing compounds from a solution

INVENTOR(S): Smith, Clark Robert

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9323151	A1	19931125	WO 1993-US4197	19930504
W:	AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN			
RW:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9342319	A1	19931213	AU 1993-42319	19930504
EP 639105	A1	19950222	EP 1993-911036	19930504
EP 639105	B1	19980923		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,			

SE

HU 70805 A2 19951128 HU 1994-3192 19930504
AT 171390 E 19981015 AT 1993-911036 19930504
ES 2123053 T3 19990101 ES 1993-911036 19930504
ZA 9303213 A 19940614 ZA 1993-3213 19930507

PRIORITY APPLN. INFO.:

US 1992-880659 19920508
WO 1993-US4197 19930504

AB A method and app. are provided for the treatment of fluids, particularly wine, to remove unwanted substances (no data). The wine is first treated in a reverse osmosis treatment unit, generating a **retentate** and a raw permeate. The membrane for the reverse osmosis unit is selected to pass in the permeate the unwanted substances, which in the case of wine may be volatile acidity (EtOAc and AcOH). The raw permeate is then subjected to a treatment column. In the case of volatile acidity, this

is

an anion exchange column, which removes AcOH from the permeate by anion exchange and removes EtOAc by base hydrolysis. This produces a purified permeate, which is depleted in volatile acidity (which is passed through with the raw permeate), but contains other components desirable for the wine. The purified permeate is then recombined with the **retentate** from the reverse osmosis column, and the result is wine with the volatile acidity and little else removed. This wine may be recirculated through the system to remove yet more of the volatile acidity. The method may

also be applied to the removal of AcH, in which case a distn. column is used instead of the anion exchange column, and the distn. residue constitutes the purified permeate which is recombined with the **retentate** from the reverse osmosis column. An embodiment utilizing a high-energy distn. column may be used to sep. out alc. and water, and then add either the alc. or the water back to the reverse osmosis **retentate**, thus producing either a higher-alc. or a lower-alc. beverage, resp.

L2 ANSWER 13 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 119:22339 CA

TITLE: A new method for the purification of the B subunit (EtxB) of Escherichia coli heat-labile enterotoxin

AUTHOR(S): Amin, Tehmina; Marcello, Alessandro; Hirst, Timothy R.

CORPORATE SOURCE: Biol. Lab., Univ. Kent, Canterbury/Kent, CT2 7NJ, UK

SOURCE: Biochem. Soc. Trans. (1993), 21(2), 213S

CODEN: BCSTB5; ISSN: 0300-5127

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors describe the facilitated purifn. of heat-labile enterotoxin (EtxB) by its heterologous expression from a recombinant plasmid, pMMB68, in a marine vibrio (vibrio sp. 60). This results in a high level of expression and selective secretion of EtxB into the medium. The purifn. of EtxB from Vibrio sp. 60 was achieved as follows. The culture was centrifuged after 16 h induction with IPTG to obtain a supernatant contg. EtxB. Ultrafiltration (Filtron, Flowgen) was carried out on the essentially cell-free medium using membranes of mol. wt. exclusions of 1000K and 10K, and subjected to diafiltration with 20mM Tris-HCl pH 7.5. The **retentate** from the 10K membrane was collected and subjected to ammonium sulfate (30-70% satn.) pptn. Recovery of EtxB at this stage was ca. 60% with respect to that in the starting supernatant. The pptd. fraction was dissolved in 1M ammonium sulfate and applied to a

hydrophobic

interaction chromatog. column (Ph Superose HR 5/5, Pharmacia). A decreasing gradient of ammonium sulfate (1.0-0M in 20 mM Tris-HCl pH 7.5) was employed and EtxB eluted at 0.75M ammonium sulfate. It was then dialyzed against 20 mM Tris-HCl pH 7.5 contg. 20 mM NaCl overnight at 4.degree. prior to its application onto an anion exchange column (Neobar AQ15/4, Flowgen). EtxB was eluted from the anion exchange column using

an

increasing gradient of NaCl (20 mM-1 M in 20 mM Tris-HCl pH 7.5). EtxB eluted as a single peak and its homogeneity was demonstrated by the silver-staining of an SDS polyacrylamide gel. Both chromatog. steps resulted in 100% recovery of EtxB with respect to the amt. applied to

each

column.

L2 ANSWER 14 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 118:61759 CA

TITLE: Some characteristics of the lignins of a fast growing cottonwood hybrid compared with those of black cottonwood. In memoriam K. V. Sarkanen

AUTHOR(S): Qian, Ping; McCarthy, Joseph L.

CORPORATE SOURCE: Dep. Chem. Eng., Univ. Washington, Seattle, WA, 98195,

USA

SOURCE: Holzforschung (1992), 46(6), 489-93

CODEN: HOLZAZ; ISSN: 0018-3830

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Because a recently developed cottonwood hybrid (P. trichocarpa .times. P. deltoides) was reported consistently to produce significantly more biomass

per ha per yr than does black cottonwood (Populus trichocarpa), certain

characteristics of the 2 lignins were compared. Extractive-free sapwood chips and meals from black cottonwood and the hybrid were delignified using aq. NaOH solns. The dissolved lignins were ultrafiltered. The UV absorption spectra, the solute lignin concn., the av. mol. wt., and the polydispersity of the lignins present in the initial, the permeate, and the **retentate** solns. were detd. Results indicated that the dissolved lignins were of relatively low av. mol. wt., e.g. a few thousand. No significant differences were found between the lignins of the 2 cottonwoods.

L2 ANSWER 15 OF 21 CA COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 115:113012 CA
 TITLE: Analysis of gelatin ultrafiltration by gel-permeation
chromatography
 AUTHOR(S): Sarrade, S.; Rios, G. M.; Autret, J. M.; Takerkart,
 G.
 CORPORATE SOURCE: Cent. Genie Technol. Aliment., USTL, Montpellier, F
 34095, Fr.
 SOURCE: Lebensm.-Wiss. Technol. (1991), 24(1), 23-8
 CODEN: LBWTAP; ISSN: 0023-6438
 DOCUMENT TYPE: Journal
 LANGUAGE: French
 AB Various permeate and **retentate** samples taken at different times
 during the ultrafiltration of a gelatin soln. on a new Ru oxide-Ti oxide
 membrane coated onto an alumina support were analyzed by gel chromatog.
 This method, coupled with the more traditional approach (consisting of a
 continuous recording of permeate flow rate and total N rejection rate)
 allow a better insight into the basic mechanisms that control membrane
 fouling and the effects of it on performance. For the particular system
 investigated, it is clearly apparent that as long as the membrane
 effectively controls the sepn., cake filtration mechanisms prevail. But,
 when the effects of the alumina support become pre-eminent, deep
 filtration mechanisms substitute for them.

L2 ANSWER 16 OF 21 CA COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 111:113740 CA
 TITLE: Recovery of proteins from whey or milk by a two-step
 process involving ultrafiltration and size exclusion
chromatography
 INVENTOR(S): Dubois, Ernest
 PATENT ASSIGNEE(S): Applications Techniques Nouvelles, Fr.
 SOURCE: Fr. Demande, 13 pp.
 CODEN: FRXXBL
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2605322	A1	19880422	FR 1986-14511	19861020
FR 2605322	B1	19890428		
WO 8910064	A1	19891102	WO 1988-FR192	19880420
W: DK, JP, US				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
EP 368862	A1	19900523	EP 1988-903858	19880420
EP 368862	B1	19921119		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 82471	E	19921215	AT 1988-903858	19880420
PRIORITY APPLN. INFO.:			FR 1986-14511	19861020
			EP 1988-903858	19880420
			WO 1988-FR192	19880420
AB Proteins with mol. wt. greater than .apprx.50,000 daltons, e.g. lactoferrin and Igs, are recovered from milk or whey by a two-step process				

comprising ultrafiltration and size-exclusion chromatog. The membrane in the ultrafiltration app. has a mol. wt. cut-off of .apprx.50,000 daltons. The **retentate**, contg. the desired proteins, is passed over size exclusion columns to sep. the Ig, lactoferrin, and albumin fractions.

L2 ANSWER 17 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 108:36503 CA

TITLE: Manufacture of a composition enriched with .beta.-casein, apparatus for this process, and application of the products obtained for food, food

or

pharmaceutical industry additives, or preparation of bioactive peptides

INVENTOR(S): Terre, Eric; Maubois, Jean Louis; Brule, Gerard; Pierre, Alice

PATENT ASSIGNEE(S): Institut National de la Recherche Agronomique, Fr.

SOURCE: Fr. Demande, 24 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2592769	A1	19870717	FR 1986-325	19860110
FR 2592769	B1	19901012		

AB Material rich in .beta.-casein and a co-product poor in .beta.-casein are obtained from mammalian milk or an aq. caseinate soln.; the milk or caseinate may be reconstituted from powders. The casein may be complexed with Ca or polymd. at 0-7.degree. before prepg. the above products by microfiltration on a mineral membrane in tangential flux at a velocity of 2.5-10 m/s, giving a .beta.-casein-enriched microfiltrate and a coproduct (**retentate**) low in .beta.-casein. A 2.5% Na caseinate soln. was treated with CaCl₂ (2 g/L) and microfiltered on SFEC M 6 1000 at

5.degree.

and 0.9-2.0 bar pressure to give a filtrate contg. 1.1 g .beta.-casein/L of 95% purity (of total protein).

L2 ANSWER 18 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 106:52352 CA

TITLE: A method for estimating the rejection coefficient-molecular weight relationship of ultrafiltration membrane for a chain polymer by using gel permeation **chromatography**

AUTHOR(S): Adachi, Shuji; Hashimoto, Kenji; Komoto, Mitsuaki; Tobita, Hidetaka

CORPORATE SOURCE: Dep. Chem. Eng., Kyoto Univ., Kyoto, 606, Japan

SOURCE: Biotechnol. Bioeng. (1986), 28(12), 1809-13

CODEN: BIBIAU; ISSN: 0006-3592

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An improved method is presented for estg. rejection coeff.-mol. wt. relation of an ultrafiltration membrane for a polydisperse chain polymer. It is based on the basic idea using gel permeation chromatog. originally developed by A. R. Copper and D. S. Van Derveer (1979). The method, in which peak spreading of an elution curve of the polymer was taken into consideration, is available for evaluating the relation over a wide range of the mol. wt. through only one expt. in analyses of the **retentate** and filtrate.

L2 ANSWER 19 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 105:132293 CA

TITLE: Antioxidant activity of amino acid-xylose browning reaction products. 2. Isolation of antioxidants from

browning reaction products by TLC and dialysis
AUTHOR(S): You, Byeong Jin; Lee, Kang Ho; Lee, Jong Ho
CORPORATE SOURCE: Dep. Food Nutr., Kangnung Natl. Univ., Kangnung, 210,
S. Korea
SOURCE: Han'guk Susan Hakhoechi (1986), 19(3), 212-18
CODEN: HSHKAW; ISSN: 0374-8111
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Browning reaction products of xylose and tryptophan were sepd. on TLC
into
4 bands with Rf values of 0.25, 0.55, 0.81, and 0.91, resp. The bands
with Rf values of 0.25 and 0.55 had strong antioxidant activity. The
band
of Rf 0.55, which had the highest activity, was pos. to Proch. acte. azka
reagent and had an absorbance max. at 275 nm. In dialysis of the
xylose-tryptophan browning reaction products, the **retentate**
fraction with antioxidant activity was sepd. into 2 bands with Rf values
of 0.25 and 0.55 on TLC. The **retentate** of the browning products
of xylose and histidine or arginine also had antioxidant activity.

L2 ANSWER 20 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 101:166522 CA
TITLE: Combination of conventional and high-performance
liquid chromatographic techniques for the isolation
of

so-called "uremic toxins"
AUTHOR(S): Brunner, Helmut; Mann, Helmut
CORPORATE SOURCE: Abt. Inn. Med. II, Tech. Hochsch. Aachen, Aachen,
5100, Fed. Rep. Ger.
SOURCE: J. Chromatogr. (1984), 297, 405-16
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using fluids from the artificial kidney as an example, a generally useful
combination of sepn. techniques is described for the preparative
isolation
of biol. active subfractions from extremely heterogeneous and dild. biol.
fluids. Hemofiltrate (20 L) and dialyzate (100 L), resp., are desalted
and concd. in 1 step by reverse osmosis using membranes with a nominal
cut-off of 500 Daltons. The **retentate** with high concns. of
uremic toxins is fractionated by preparative ion-exchange chromatog.
(double column technique with detection at 206 nm) and size exclusion
chromatog. yielding large amts. of ninhydrin-pos. subfractions which
inhibit DNA synthesis of rat bone marrow and HeLa cells in vitro, resp.
These fractions were analyzed by reversed-phase and size exclusion
high-performance liq. chromatog. Many of the isolated fractions
contained
peptides.

L2 ANSWER 21 OF 21 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 93:3211 CA
TITLE: A new approach to the analysis of ganglioside
molecular species
AUTHOR(S): Nagai, Yoshitaka; Iwamori, Masao
CORPORATE SOURCE: Dep. Biochem., Tokyo Metrop. Inst. Gerontol., Tokyo,
173, Japan
SOURCE: Adv. Exp. Med. Biol. (1980), 125 (Struct. Funct.
Gangliosides), 13-21
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An improved process for the purifn. and characterization of gangliosides
was developed. Tissue Me2CO powders are extd. with CHCl3-MeOH. The
exts.
are applied to a DEAE-Sephadex column and eluted with 10 vols. MeOH
contg.

0.2N NaOAc. The acidic lipids obtained are hydrolyzed with 0.5N NaOH in MeOH, and the soln. is neutralized and dried. The residue is dissolved in H₂O and dialyzed. The **retentate** is dried and the residue dissolved in CHCl₃-MeOH for chromatog. on silica gel. The column is eluted with 95:5 and 85:15 CHCl₃-MeOH to elute sulfatides and then with 1:1 to elute gangliosides. They are applied to a DEAE-Sephrose column, eluted with a gradient of NH₄OAc in MeOH, and sepd. to individual gangliosides on a column of Iatrobeds.

=> s spectromet?

L3 347206 SPECTROMET?

=> s l3 and (mass or desorpt? or ion?)

518703 MASS
70261 DESORPT?
1319572 ION?
L4 169834 L3 AND (MASS OR DESORPT? OR ION?)

=> s l4 and capture(10w)chromatogr?

55209 CAPTURE
250622 CHROMATOGR?
664 CAPTURE(10W)CHROMATOGR?
L5 63 L4 AND CAPTURE(10W)CHROMATOGR?

=> s l5 and screen?

151737 SCREEN?
L6 0 L5 AND SCREEN?

=> s l5 and inhibit?

1216117 INHIBIT?
L7 2 L5 AND INHIBIT?

=> d l7 1-2 ibib ab

L7 ANSWER 1 OF 2 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 98:50445 CA

TITLE: Identification of abscisic acid in Tulipa gesneriana
L. by gas-liquid chromatography with electron
capture and combined gas-liquid
chromatography and **mass**
spectrometry

AUTHOR(S): Terry, Paul H.; Aung, Louis H.; De Hertogh, August A.
CORPORATE SOURCE: Beltsville Agric. Res. Cent., U. S. Dep. Agric. Sci.
Educ. Adm., Beltsville, MD, 20705, USA
SOURCE: Plant Physiol. (1982), 70(5), 1574-6
CODEN: PLPHAY; ISSN: 0032-0889

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A major growth **inhibitory** substance of tulip bulbs (T. gesneriana) was shown to be ABA. The ABA Me ester of the free ether-sol. acid fractions of tulip organs had the identical retention time on gas chromatog. with electron capture detector as authentic ABA Me ester. In addn., the **mass** spectra were the same. On a unit dry matter basis, the basalplate and floral shoot contained 3.6 and 2.6 times more ABA than the fleshy scales, resp.

L7 ANSWER 2 OF 2 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 86:117007 CA
 TITLE: Improved techniques for sequencing polypeptides using
 electron **capture** detection and gas
chromatography-mass
spectrometry
 AUTHOR(S): Nau, H.
 CORPORATE SOURCE: Ges. Molekularbiol. Forsch., Stoeckheim/Braunschweig,
 Ger.
 SOURCE: Adv. Mass Spectrom. Biochem. Med. (1977), 2, 543-57
 CODEN: AMSMDB
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB A method is described for detg. optimal conditions for hydrolysis of
 polypeptides prior to further degrdn. and gas chromatog.-**mass**
 spectroscopic (GC-MS) anal. Thus, samples of glucagon and melittin were
 subjected to acid hydrolysis under various conditions, followed by
 derivatization to the N-heptafluorobutyl-peptide Me esters and anal. by
 GC with electron capture detection. From the patterns of the gas
 chromatograms obtained, the optimal hydrolysis conditions can be selected
 readily. Addnl. information is provided for a sample of potato
 carboxypeptidase **inhibitor**, hydrolyzed with acid, derivatized,
 and analyzed by a computerized GC-MS system. The course of enzymic
 degrdn. also can be monitored by the given procedure.

=> d his

(FILE 'HOME' ENTERED AT 20:50:09 ON 25 AUG 2000)

FILE 'CA' ENTERED AT 20:50:15 ON 25 AUG 2000

L1 1197 S RETENTATE
 L2 21 S L1 AND CHROMATOGRAPHY
 L3 347206 S SPECTROMET?
 L4 169834 S L3 AND (MASS OR DESORPT? OR ION?)
 L5 63 S L4 AND CAPTURE(10W)CHROMATOGR?
 L6 0 S L5 AND SCREEN?
 L7 2 S L5 AND INHIBIT?

=> s 15 not 17

L8 61 L5 NOT L7

=> s 18 and receptor(10w)ligand

395380 RECEPTOR
 183709 LIGAND
 14030 RECEPTOR(10W)LIGAND
 L9 0 L8 AND RECEPTOR(10W)LIGAND

=> s 18 and assay

210646 ASSAY
 L10 5 L8 AND ASSAY

=> d 110 1-5 ibib ca

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 IBIB ----- BIB, indented with text labels
 IMAX ----- MAX, indented with text labels
 ISTD ----- STD, indented with text labels

 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels

 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations

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 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
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L10 ANSWER 1 OF 5 CA COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 119:179512 CA
 TITLE: Quantification of the carcinogens
 2-amino-3,8-dimethyl- and 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline
 and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine
 in
 food using a combined **assay** based on gas
 chromatography-negative **ion mass**
 spectrometry
 AUTHOR(S): Murray, Stephen; Lynch, Anthony M.; Knize, Mark G.;
 Gooderham, Nigel J.
 CORPORATE SOURCE: Dep. Clin. Pharmacol., R. Postgrad. Med. Sch.,
 London,

W12 ONN, UK
SOURCE: J. Chromatogr., Biomed. Appl. (1993), 616(2), 211-19
CODEN: JCBADL; ISSN: 0378-4347
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A gas chromatog.-**mass spectrometric assay** was developed for the measurement of 2-amino-3,8-dimethylimidazo[4,5-f]quinoxaline (MeIQx), 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline (DiMeIQx), and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) in food. Stable isotope-labeled analogs of MeIQx and PhIP are used as internal stds. and the synthesis of deuterated PhIP is described. The **mass spectrometer** is operated in the electron-capture neg. ion chem. **ionization** mode and the amines are **chromatographed** as their di-3,5-bistrifluoromethylbenzyl derivs. All 3 compds. can be measured in a single chromatog. run and detection limits of 0.05, 0.1, and 0.2 mg/g for MeIQx, DiMeIQx, and pHIP, resp., in food are obtained. Various home-cooked and com. prepd. foodstuffs were analyzed with this **assay** and several contained measurable amts. of one or more of the 3 amines.

L10 ANSWER 2 OF 5 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 117:65778 CA

TITLE: Quantitation of 20-hydroxy-5,8,11,14-eicosatetraenoic acid (20-HETE) produced by human polymorphonuclear leukocytes using electron **capture ionization gas chromatography/mass spectrometry**

AUTHOR(S): Hill, Elizabeth; Murphy, Robert C.

CORPORATE SOURCE: Natl. Jew. Cent. Immunol. Respir. Med., Denver, CO, 80206, USA

SOURCE: Biol. Mass Spectrom. (1992), 21(5), 249-53

CODEN: BIMSEH; ISSN: 1052-9306

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Arachidonic acid can be enzymically oxidized at the terminal Me group by the cytochrome P 450 system found in several tissues and cells, including human polymorphonuclear leukocyte. The .omega.-hydroxy metabolite, 20-HETE, has interesting and diverse biol. activities. Accurate measurement of quantities of this metabolite using phys. chem. methods.

has

not been previously described, but is necessary to assess biosynthesis of this eicosanoid from endogenous arachidonic acid. A procedure is described to quantitate 20-HETE produced by human polymorphonuclear leukocytes following physiol. stimulation using (18O2)carboxy-20-HETE as internal std. Since the human neutrophil produces relatively small amts. of this eicosanoid, such a study required substantial sensitivity in the quant. **assay**. Following stimulation of the neutrophil, cell exts. and supernatants were purified by reversed-phase HPLC,

catalytically

reduced then derivatized to the pentafluorobenzyl ester, trimethylsilyl ethers before electron capture **ionization** gas chromatog./

mass spectrometry. Using selected **ion** monitoring, the amt. of 20-HETE present in a biol. ext. could be detected when as little as 60 pg per sample were available. Following stimulation of the human neutrophil with formyl-methionyl-leucyl-phenylalanine (0.1 .mu.M), platelet activating factor (0.1 .mu.M) as well as with the

calcium

ionophore A23187 (2 .mu.M), 20-HETE was generated from endogenous arachidonate in concns. of 1.2, 1.3, and 5.7 pg/106 cells, resp.

L10 ANSWER 3 OF 5 CA COPYRIGHT 2000 ACS

ACCESSION NUMBER: 95:57383 CA

TITLE: Microscale preparation of pentafluorobenzyl esters. **Electron-capture gas chromatographic**

